CLAIMS

1. A reactor, comprising:

a chamber having an inlet and an outlet, wherein said inlet is to receive a fluid and said outlet is to output said fluid;

a partition housed in said chamber, wherein said partition includes a plurality of perforations to segment said fluid; and

a conductor coupled to said chamber; wherein said conductor is to generate a capacitance between said conductor and said partition to vibrate said partition.

2. The reactor as recited in claim 1, wherein said partition and said conductor are coupled to a power source and wherein said capacitance is variable.

3. The reactor as recited in claim 2, further comprising a support coupled to said conductor, wherein said support is to prevent said conductor from vibrating.

4. The reactor as recited in claim 3, wherein said partition is insulated to prevent an electrical disruption in the fluid.

5. The reactor as recited in claim 4, wherein said conductor is insulated to prevent an electrical disruption to said reactor.

6. The reactor as recited in claim 2, wherein said partition is configured to follow a vibrational pattern to prevent a back flow of said fluid.

7. The reactor as recited in claim 6, wherein said perforations have a diameter of about ten times a diameter of one of a group consisting of a molecule and cell in said fluid.

8. The reactor as recited in claim 7, wherein said inlet includes a plurality of openings to allow said fluid to enter said chamber in a plurality of layered streams.

9. The reactor as recited in claim 3, further comprising a heat exchange channel formed in said support, wherein said heat exchange channel is to receive a flow of coolant to remove heat from said chamber.

10. The reactor as recited in claim 9, further comprising a sensor provided in said support to measure a temperature of said fluid in said chamber.

11. The reactor as recited in claim 9, further comprising a sensor to measure a pressure in said chamber.

12. A method of reacting a fluid comprising:

receiving the fluid in a chamber;

separating said fluid into a plurality of fluid segments,

vibrating said fluid, wherein said separating and said vibrating lower a diffusion distance of said fluid; and

outputting said fluid from said chamber.

13. The method of reacting as recited in claim 12, wherein said fluid is separated when said fluid flows through a partition having a plurality of perforations.

14. The method of reacting as recited in claim 13, wherein said vibrating comprises:

providing a conductor coupled to said chamber; and

generating a capacitance between said conductor and said partition.

15. The method of reacting as recited in claim 14, wherein said fluid is received in layered streams.

16. The method of reacting as recited in claim 15, wherein each of said plurality of perforations is about ten times said diameter of one of a group consisting of a molecule and cell in said fluid.

17. The method of reacting as recited in claim 12, further comprising removing heat from said chamber.

18. The method of reacting as recited in claim 17, wherein said removing comprises:

providing a heat exchange channel coupled to said chamber; and

receiving a flow of coolant into said heat exchange channel.